

## EXPLANATION OF PLATE VI.

- Fig. 1. *Euonyma turiformis*, Krs. (Stockholm Museum).  
 Fig. 2. *Euonyma turiformis*, Krs., var. *acus*, Morelet (type, in British Museum).  
 Fig. 3. *Euonyma unicornis*, sp. n.  
 Fig. 4. *Euonyma linearis*, Krs. (Stockholm Museum).  
 Fig. 5. *Euonyma varia*, sp. n. (type).  
 Figs. 6, 7. *Euonyma varia*, sp. n.  
 Fig. 8. *Euonyma pietersburgensis*, Preston, var. *levis*, nov.  
 Fig. 9. *Euonyma stunderi*, sp. n.  
 Fig. 10. *Euonyma siliqua*, sp. n.  
 Fig. 11. *Euonyma pruizenensis*, sp. n.  
 Fig. 12. *Opeas lepidum*, sp. n.  
 Fig. 13. *Curvella majubana*, sp. n.  
 Fig. 14. *Curvella saundersæ*, sp. n.  
 Fig. 15. *Curvella modesta*, sp. n.

XXIX.—*Descriptions and Records of Bees.*—XXXII.

By T. D. A. COCKERELL, University of Colorado.

*Pseudoponurgus æthiops* (Cresson).

Berkeley (near Denver), Colorado (*Oslar*). In Coll. Baker.

*Halictus clelandi*, sp. n.

♂.—Length about 6 mm.

Head and thorax black, abdomen and legs dark reddish brown; pubescence greyish white, rather abundant; lower part of clypeus cream-colour, the actual margin ferruginous; mandibles ferruginous, dark at base; flagellum long, crenulate, dark coffee-brown beneath.

This cannot be the male of *H. globosus*, as the thorax has no æneous tinge, and the second r. n. and third t.-c. are very distinct (*H. cognatus*, Sm., is probably the male of *globosus*). The much darker flagellum easily distinguishes it from *H. oxleyi*. Head broad, eyes converging below, face with much light hair; front minutely, very densely punctured, a very small space in front of ocellus smooth and shining; mesothorax hairy, finely and densely punctured, but shining; area of metathorax semilunar, with fine irregular rugæ extending over the whole surface; pleura shining; tegulæ rather large, smooth, pale reddish testaceous. Wings ample, hyaline, nervures and stigma pale testaceous; second s.m. receiving first r. n. before the end; third s.m. very much

larger than second. Small joints of tarsi becoming ferruginous; spurs yellowish white. Abdomen broad for a male, quite hairy, the lateral bases of second and third segments with denser hair, making rather inconspicuous patches; surface shining, with very fine close punctures, about the same on first two segments, but becoming weaker beyond; hind margins of segments slightly reddish pallescent.

*Hab.* Adelaide, Australia (*Schomburgk*). Berlin Museum.

*Halictus chapmani*, sp. n.

♀.—Length about 7 mm.

Very close to *H. representans*, Sm., but smaller. Smith compares *representans* with the European *leucozonius*; the present species, compared with *leucozonius*, is much smaller, with narrower (instead of broader) second s.m., third t.-c. and second r. n. much weakened, clypeus less produced, mesothorax more finely punctured, hind spur with a big truncate subbasal tooth, and a long low lamina beyond (with a series of nodules in *leucozonius*), &c. In size and general appearance *H. chapmani* resembles not *leucozonius*, but *lincolatus*, Lep. The sculpture is essentially as in *representans*. Black, the abdomen shining, the hind margins of the segments broadly very dark reddish; hair of head and thorax rather dull white, not at all fulvous or ochraceous; mandibles chestnut-red, black at base; clypeus broad, very shiny, with large well-separated punctures; front dull and granular, but under the microscope more shining, with minute punctures between longitudinal ridges; flagellum dark brown beneath, redder apically; mesothorax and scutellum shining, but quite closely punctured, anteriorly on mesothorax ridges are developed like those on front, only transverse; area of metathorax semilunar, with fine longitudinal ridges, more or less irregular and connected by cross-ridges; posterior truncation sharply defined at sides; pleura with much white hair; tegulae shining rufo-piceous. Wings very faintly dusky, nervures and stigma reddish sepia; b. n. very nearly reaching t.-m.; second s.m. receiving first r. n. before end; third s.m. considerably larger than second, third t.-c. with only a single curve. Legs very dark reddish brown, with white hair; abdomen broad, rather hairy, except middle of first three segments, the first two segments finely punctured, shining; base of second segment with a white hair-patch on each side, third and fourth with thin indistinct basal hair-bands; second ventral segment pollen-collecting.

*Hab.* Western Australia (*Preiss*). Berlin Museum, 2564.

*Halictus asperithorax*, sp. n.

♀.—Length about 8 mm.

Black, hair of head and thorax white below, dull pale ochraceous above. A species related to *H. chapmani*, but easily separated by the dull coarsely rugoso-punctate mesothorax. Mandibles dark, reddish subapically, and with shining golden hairs; clypeus broad, not produced, shining, with grooves and a few scattered punctures; front broad, appearing minutely granular, but microscopically longitudinally striate, with rows of punctures separated by raised lines; flagellum dull brown beneath; mesothorax coarsely granular, with very dense punctures; scutellum more shining and much more finely punctured; area of metathorax broad, very finely lineolate all over; posterior truncation large and very well defined; the scutellum has a few very large punctures scattered among the small ones; tegulæ shining rufous, not punctured. Wings faintly dusky, stigma and nervures dilute sepia; third t.-c. and second r. n. greatly weakened; second s.m. very large and broad, receiving first r. n. nearly at its end. Legs very dark reddish, with pale hair, yellowish on inner side of tarsi; hind spur with a broad but not long subbasal truncate tooth, and obscure crenulatiform teeth beyond (*H. lanarius* type of spur); abdomen broad, with an evident dark reddish tint, granular from minute punctures, with broad dull white basal hair-bands, that on second segment failing in middle. In my table in 'Entomologist,' Nov. 1905, this runs straight to *H. gilesi*, which it much resembles, differing in the microscopic characters. The second abdominal segment is minutely and nearly uniformly punctured all over, the punctures running more or less into grooves near the posterior margin; in *gilesi* the puncturation is more diversified, but in both the transverse lineolation can be seen. The front is also different.

*Hab.* Melbourne, Victoria, Aug. 1900 (C. F., Turner Collection). British Museum.

*Parasphcodes plorator*, sp. n.

♀.—Length about 10 mm.

Easily known from all the other species by the entirely black head, thorax, and abdomen, with scanty pale pubescence, the dark reddish legs, and the very dark smoky wings. Mandibles dark; lower edge of clypeus with long golden hairs; clypeus shining, with irregular punctures; front appearing granular, microscopically lineolate and pleated,

producing a curious wave-like effect; flagellum (except at base) obscure coffee-brown beneath; mesothorax dull, with scattered very minute punctures, the median groove strong; under the microscope the mesothoracic surface is seen to be minutely tessellate; tubercles densely fringed with pale hair; area of metathorax large, minutely granular, not at all plicate; posterior truncation heart-shaped, shining, well-defined; tegulae dark reddish. Wings very dark, with a violaceous lustre; stigma and nervures dark reddish; first r. n. meeting second t.-c.; third t.-c. with a simple curve; b. n. rather less bent than is usual in *Halictus*; wings large, as in *Parasphecodes*. Hind spur simple. Abdomen shining, narrowed basally, widest at the third segment; apical segments with dark fuscous hair; no hair-bands or patches; hind margin of second segment reddish; apex of fifth segment obtusely pointed, covering sixth; venter with white hair, more or less curled, and doubtless pollen-collecting; apex of venter with fuscous hair.

*Hab.* Melbourne, Victoria, Aug. 1900 (C. F., Turner Collection). British Museum.

*Protoxoa texana* (Friese).

Lee County, Texas, Aug. 10, ♀, Aug. 26, ♂, 1907 (Birkmann).

These splendid bees, which occurred on flowers of *Polygonum*, evidently belong to the species from Texas which Friese named in manuscript *Oxoa texana*, but published under *O. vagans*, Fox. True *O. vagans* comes from Lower California, and has the ventral hair of the thorax pallid, not dark brown or almost black as in *texana*. The eyes also of the male more nearly touch above in *vagans* than in *texana*. I suppose that the Cypress Mills, Texas, example cited by Fox was really *texana*. The male agrees with Friese's description, except that at certain angles slight green and purple tints can be seen on the abdomen, a character more pronounced in the female. The female, not before described, is very large (length about 24 mm.), with the usual sexual differences. The clypeus has coarse, large, partly confluent punctures; the front on each side of the antennae is dull and granular, not punctured for some distance; the basal half of the second abdominal segment is rather closely punctured. The insect must go in *Protoxoa*, as it has six-jointed maxillary palpi. The tongue is linear, though broader than in *Oxoa flavescens*; the apical plate of the abdomen is bidentate.

The wings are much darker than in *O. tristis*, and there are other differences.

*Nomia pattoni*, Ckll.

Fedor, Texas, Oct. 18, 1897 (*Birkmann*).  
New to Texas.

*Nomia nortoni*, Cresson, var. *plebeia*, n. var.

♀.—The three abdominal bands clear ferruginous instead of green. This looks like a new species, but has the structure of *nortoni*, and is surely only a variety. The type specimen bears many mites, especially on the prothorax\*.

*Hab.* Fedor, Texas, June 18, 1905 (*Birkmann*).

Typical *N. nortoni* occurs at Fedor, visiting flowers of mesquite, horse-mint, *Polygonum*, &c., as Mr. Birkmann informs me.

*Nomia maneei*, sp. n.

♀.—Length about 9 mm.

Black, with green apical tegumentary bands on abdominal segments 2 to 4; no trace of a green band on first segment, but a patch of white hair on each side, the rudiment of an apical hair-band. This beautiful species has been confused with *N. foxii*, from which it is readily separated thus: labial palpi with joints 2 to 4 much longer; punctures of mesothorax well formed anteriorly; middle of scutellum with sparse punctures on a shining ground, and no little punctures between; wings a little darker, b. n. meeting t.-m.; second abdominal segment with smaller punctures; third appearing

\* *Disparipes texanus*, sp. n.—Length 167, breadth 147  $\mu$ . Pale red, shiny, anterior border of body broadly hyaline; shape as in *D. americanus*, Banks, to which it is closely allied, but the following characters are distinctive: large humeral bristles not so near the margin; three pairs of bristles on the posterior margin, the intermediate pair slender, the inner longer than the intermediate (these bristles rather variable); two pairs of very large ventral abdominal bristles, the anterior pair more laterad than the posterior; hind foot with a very long bristle in addition to the shorter ones; long subapical bristle of hind foot accompanied by a shorter one; first three pairs of legs very much more bristly than in Banks's figure of *D. americanus*; sternal sclerites apparently longer in proportion to their breadth; claws much more robust, especially at base, and much more strongly hooked, bent to less than a right angle; clavate organs behind anterior legs large and well developed, but not setiferous as figured for *D. americanus*.

*Hab.* On *Nomia nortoni*, var. *plebeia*, attached to the thoracic hairs; Fedor, Texas, June 18 (*Birkmann*).

granular from the excessively minute punctures, and fourth the same; abdominal bands very beautiful, emerald-green shot with lilac, the third more lilac than green. Known from *N. mesillensis* by the more closely punctured first abdominal segment, the much narrower and differently coloured bands, &c. The tongue is linear.

*Hab.* Southern Pines, North Carolina, June 19, 1909 (*A. H. Manee*). In coll. Birkmann.

*Nomia fedorensis*, sp. n.

♀.—Like *N. maneei*, but a little larger, with the following distinctive characters: flagellum bright ferruginous beneath (duller and browner than in *maneei*); disc of scutellum much more closely punctured; first abdominal segment with very strong, regular punctures; second also much more strongly punctured; abdominal bands broader, very brilliant, coloured as in *maneei*, except that the first is flushed with vermilion. Both species have a prominent ridge down the middle of the clypeus; this also occurs in *foxi*. *N. fedorensis* is easily known from *foxi* by the much more finely and closely punctured third abdominal segment, and the very strongly and regularly punctured first segment.

♂.—Similar to *N. foxii*, but very easily separated by the entirely black legs, the hind femora much thicker and more humped above. The second abdominal segment has a very deep constriction; the fourth segment is punctured in the manner of *foxi*, not at all as in *universitatis*.

*Hab.* Fedor, Lee County, Texas, June 7, 1909, June 1910 (*Birkmann*).

*Lithurgus albofimbriatus*, Sichel.

The *Lithurgus* from Tahiti, which I formerly recorded as *L. atratiformis*, Ckll., is in reality *L. albofimbriatus*. The two species are extremely closely allied, but *atratiformis* has the white bands on abdomen, above and below, about twice as broad as in *albofimbriatus*.

*Megachile aurifrons*, Smith.

Smith described this from "New Holland," but I have a specimen from his collection labelled Queensland. Mr. Turner also took it at Mackay (his number 288). The mandibles of this species are five-toothed in the female.

*Megachile sequior*, Ckll.

This species was described from a male labelled "Ade-laide, Schomburgk." I have reason for thinking that it was really a Schultzian specimen from Port Darwin, which passed through Schomburgk's hands. At any rate, four males were taken by Turner at Port Darwin, Dec. 1902. The female, not before described, is represented by a specimen from N.W. Australia (*C. F.*, Turner Collection), in the British Museum. It is about  $11\frac{1}{2}$  mm. long, the thorax six-spotted like the male, the pubescence also coloured as in the male; flagellum dull ferruginous beneath; eyes green; ventral scopa white, black on last segment. It is very close to *M. macularis*, D. T., and would at first sight be taken for it, but it may be separated by the black hairs which project at sides of abdomen being confined to the fifth and sixth segments, and also by the green eyes.

*Megachila rhodura*, Ckll.

The female, hitherto unknown, was taken by Mr. Turner at Mackay, Queensland, at flowers of *Eucalyptus*, Dec. 1899. It is about  $12\frac{1}{2}$  mm. long, in general similar to the male, the tegument of the last segment, and the penultimate except at base, red, covered with fine appressed fulvous hair, which also extends forward over the fourth segment. Head large, oblong, the eyes slightly *diverging* below; sides of face with pure white hair; middle of lower edge of clypeus with a small nodule, defined by a notch on each side; eyes light green; mandibles long, the cutting-edge thickly fringed with red hair, in the manner of *M. trichognatha*, Ckll., which is related; ventral scopa entirely white.

*Megachile trichognatha*, Ckll.

A new locality is Victoria (*C. F.*, Turner Collection). British Museum. *M. ferox*, Sm., bears the same data; it was described from Swan River. *M. tomentella*, Ckll., also occurs in Victoria (*C. F.*) and by Swan River.

*Megachile pararhodura*, sp. n.

♂.—Length 10 mm.

So close to *M. rhodura* that only careful comparison shows it to be different. Abdominal segments 3 to 6 have the tegument chestnut-red, a darker tint than the red of *rhodura*; the abdomen is broader, and the large apical lobes are wider apart; the tarsi have longer and more abundant hair, and the

yellowish-white hind tibial spurs are very much larger; the middle tarsi are shorter, especially the last joint; the face (covered with white hair) is a little broader. Tarsi and coxæ of anterior legs simple.

*Hab.* Mackay, Queensland (*Turner*, 325). British Museum.

The hind spur is  $595\ \mu$  long, minutely serrulate. That of *M. rhodura* measures about  $425\ \mu$ .

*Megachile mackayensis*, sp. n.

♀.—Length about 12 mm.

Black, of the parallel-sided type, the hair of front, sides of face, and a large patch covering the fifth and sixth and more than apical half of fourth segments of abdomen, all very bright fox-red. Head round seen from in front; mandibles broad, deeply grooved; clypeus densely rugoso-punctate, short but arched and prominent, the lower margin crenulate; antennæ wholly dark; eyes dark reddish; vertex very finely and densely punctured, with fuscous hair (some fulvous posteriorly); cheeks with white hair; mesothorax and scutellum very closely punctured but shining, the hair of scutellum and front and sides of mesothorax fuscous, but on disc of latter mainly yellowish, though very thin and inconspicuous; a tuft of creamy-white hair is at each posterior corner of mesothorax, and a larger one just behind tubercles, though the hair on the latter is black; hair of uppermost part of pleura black or fuscous, otherwise dull white; sides of metathorax with much creamy-white hair; tegulæ piceous. Wings moderately dusky; second s.m. very long. Legs black, with white hair, that on the inner side of the moderately broad hind basitarsus fulvous; spurs brown, hind spur bent at apex. Abdomen above, except for the large red patch, black without bands or spots; ventral scopa creamy white, dark fuscous on last segment, and penultimate except at base. Resembles *M. erythropyga*, Smith, but the red abdominal patch is larger, and the basal segments have no white hair-bands.

♂.—Length about 10 mm.

Face and front covered with bright rufo-fulvous hair; flagellum long and slender, black; anterior tarsi simple; anterior coxæ not spined; second and third abdominal segments with the hind margins narrowly reddish, and at sides covered with bright rufo-fulvous hair, forming narrow bands; red patch covering fifth segment, basal half of sixth, and apical two-fifths of fourth; apex (sixth segment) obtusely bilobed. Compared with *M. erythropyga* the head is smaller, the mesothorax more

densely and minutely punctured, the b. n. falls short of t.-m. (in *erythropygæ* they meet), the sixth abdominal segment is not distinctly concave above in lateral view, as it is in *erythropygæ*, and the ornamentation of the abdomen differs in detail. It is also very close to *M. beutenmulleri*, Ckll., but may be separated by the ornamentation of the abdomen.

*Hab.* Mackay, Queensland; female (type), Nov. 1899; male, Jan. 1899 (*Turner*, 407). British Museum.

The sexes were associated by the collector.

*Megachile ustulatiformis*, sp. n.

♂.—Length about 13 mm.; width of abdomen 5.

Much more robust than *M. mystacea*; black; face and front densely covered with silver-white hair having a slight creamy tint; vertex with thin white hair; cheeks with mostly black hair, but light below; head broad; eyes large, dark reddish; mandibles broad, with three strong teeth, their broad outer surface with many minute punctures and some larger ones; antennæ black; vertex densely punctured, the punctures much larger at sides posteriorly; thorax with the hair entirely purplish black; mesothorax and scutellum with very distinct and strong punctures, the shining surface between very evident on disc of mesothorax; area of metathorax with a median raised line; tegulæ rufo-piceous, finely punctured. Wings strongly fuscous; second s.m. shorter than in *M. ustulata*. Legs black, with black and pale hair; anterior coxæ with long spines, but no bright hair-patches; anterior femora keeled below, the keel (except at base) and inner surface ferruginous; anterior tibiæ robust, trigonal, with the inner and lower sides, and apical margin of outer side narrowly, ferruginous; anterior tarsi ferruginous, moderately flattened, with an even fringe of pure white hair behind, and curled dark hairs on first joint in front, the anterior apices of joints produced; middle tarsi with fulvous hair on inner side, black on outer, and long white hairs behind; hind tibiæ rugose, shining, with short black hair on outer side and white tomentum on inner, the edge of the latter appearing as a narrow white band along the margin, when the tibiæ are seen from the side; hind tarsi with fulvous hair on inner side, and long creamy-white hairs in front, the basitarsus only moderately broadened; claws bidentate; spurs ferruginous; abdomen short and broad, covered above with rufo-fulvous hair (not so bright as in *mystacea*), the first segment with dark hair only at sides of basin; an appearance of darker apical bands on first three segments; apex (edge of

sixth segment) broadly rounded, slightly crenulate, weakly emarginate in middle, with a depression or pit just in front of the emargination; no ventral spine.

*Hab.* Cairns, Queensland, "Kur. 1.02" (*Turner*). British Museum. Mr. Turner took *M. ustulata*, Sm., ♀, and *M. mystacea* (Fabr.), ♂, also at Kuranda.

I do not think *M. ustulatiformis* can be the male of *ustulata*, because the female *ustulata*, agreeing perfectly with Smith's description and my notes from Smith's type, has the shining vertex with large widely scattered punctures. It also has the wings darker, the second s.m. longer and the marginal cell deeper than in *ustulatiformis*.

*Megachile micrerythra*, sp. n.

♀.—Length 7 mm.

Not so robust as *M. abdominalis*; head and thorax black, abdomen red, the colour tegumentary; hair of head and thorax scanty, white, a little yellowish on vertex; mandibles black, tridentate, not very broad; clypeus and supra-clypeal area shining but closely punctured; the disc of the broad short clypeus with a pair of low mammiform protuberances; flagellum dark reddish beneath; vertex, mesothorax, and scutellum very densely rather coarsely punctured; tegulae very dark reddish. Wings clear, nervures and stigma reddish brown; legs black, with light hair, small joints of tarsi bright ferruginous; abdomen well punctured, with scanty short yellowish hair, not forming bands or spots; ventral scopa entirely creamy white.

Allied to *M. abdominalis*, but smaller and narrower, with proportionately longer eyes, and other differences. In size and shape it resembles *M. semicaudens*, Ckll.

♂.—Looks like the female; face covered with shining white hair; anterior tarsi simple; anterior coxæ not spined; middle and hind tarsi and small joints of anterior ones red; thorax above with six white hair-spots, one at each corner of mesothorax, and two in scutello-mesothoracic suture; abdomen red, with the lower border of basin of first segment broadly black; apex (sixth segment) broadly emarginate or very obtusely bilobed (in *semicaudens* it is bidentate); no ventral spine.

*Hab.* Port Darwin, Nov. and Dec. 1902, 1 ♀, 2 ♂ (*Turner*). British Museum.

The cheeks in the female are narrower than the eyes and rough; in *abdominalis* they are broader and shining. Superficially this species looks just like *Osmia semicubra*.

*Megachile stalker*, sp. n.

♀.—Length about 9 mm.

Of the parallel-sided type; head and thorax black; abdomen with the first two segments and extreme base of third black, the rest with the tegument deep chestnut-red, with scanty white pubescence. Head large and thick, longer than broad; vertex broad; cheeks nearly as broad as eyes; front and vertex strongly and closely punctured, shining between the punctures; much pure white hair at sides of face, and a tuft on each side extending over antennæ; scape black, red at end; flagellum bright red, black at apex above; mandibles black, thick; clypeal region extremely peculiar; a large blunt spine, directed obliquely downwards and outwards, projects from the supraclypeal area; sides of clypeus produced into broad outwardly-directed lamellæ, which are triangular and pointed; disc of clypeus shining, appearing deeply sunken between the great lamellæ, the excavation suboval in form; mesothorax and scutellum shining, with very strong well separated punctures; a conspicuous patch of white hair at each corner of mesothorax, but none in scutello-mesothoracic suture; area of metathorax strongly wrinkled basally; tubercles and sides of metathorax with much pure white hair; tegulæ dark reddish brown. Wings hyaline, nervures and stigma dark brown. Legs black, anterior femora and tibiæ largely chestnut-red in front; spurs yellowish white; second and third abdominal segments with a marginal patch of white hair on each side; ventral scopa entirely white.

*Hab.* Alexandria, N. Australia, Dec. 20, 1905 (*W. Stalker*).

Rather like *M. pararhodura*, but much smaller. The extraordinary clypeal structure is quite distinctive.

*Megachile austeni*, Ckll.

Mr. Turner took this at Mackay (Feb. 1900) and Cairns (Kur., 1. 02).

The Cairns specimen before me is larger than that from Mackay, but I do not know whether this is an individual or racial peculiarity.

*Megachile quinquelineata*, Ckll.

Mackay, Queensland, at flowers of heliotrope, Sept. 1899 (*Turner*); Cape York, April 1902, 2 ♀ (*Turner*).

Cape York is about 800 miles N.N.W. of Mackay, but the specimens from the two localities show no difference.

*Megachile detersa*, sp. n.

♀.—Length 10 mm.

In all respects extremely close to *M. quinquelineata*, but with the following differences:—Abundant hair of face (exposing only upper part of clypeus, which has large, more distinctly separated punctures) pale yellow; eyes greenish; flagellum much longer (about  $3\frac{1}{4}$  mm.), obscurely reddish beneath; anterior femora with a large brush of white hair beneath; outwardly directed tooth at end of anterior tibiæ smaller and more spiniform. Wings quite strongly dusky. Apical dorsal segment of abdomen with fine appressed white hair on disc; hind basitarsus small and short, hardly longer than the next two joints united; middle tarsi with a fringe of very long white hairs behind; anterior coxæ with short triangular spines; ventral scopa wholly absent, although the specimen seems quite fresh.

This remarkable specimen has many male characters, although the abdomen is formed entirely as in all females, with sting, &c. The antennæ are 13-jointed!

There can be little question that it is a very peculiar gynandromorph (a result of hybridization?), but it was taken from a series in the Turner Collection supposed to be all the same.

*Hab.* Mackay, Queensland, Feb. 1900 (*Turner*, 458).

Aside from the gynandromorphic characters, this is evidently distinct from *M. quinquelineata*, though it may be a hybrid between *quinquelineata* and something else, perhaps *M. rhodogastra*.

*Megachile rhodogastra*, sp. n.

♂.—Length 11 mm.

Rather robust, but parallel-sided; black, with the tegument of the sixth abdominal segment, the apical margin of the fifth broadly, and the ventral surface of abdomen clear ferruginous; the fifth and sixth segments (except the basal middle of fifth narrowly) are covered with short scale-like yellowish hair, and also bear much erect yellow hair. Head broad; face densely covered with shining creamy white hair; clypeus normal; mandibles black; cheeks below with a copious beard of white hair; flagellum very obscurely brownish beneath; vertex, mesothorax, and scutellum closely punctured, but the shining surface between the punctures evident; vertex with dark fuscous, occiput with white hair;

mesothorax and scutellum with black hair, but some white in the suture between them and just behind tegulæ; much long white hair behind scutellum, and a white tuft below tegulæ; hair of upper part of pleura black, the rest white; tegulæ dark rufo-fuscous. Wings strongly infuscated. Legs dark rufo-fuscous, with black and white hair, that on inner side of tarsi rufo-fulvous; anterior tarsi simple, but rather thick; anterior and middle tarsi with a fringe of long hair behind; hair on outer side of hind tibiæ glittering white. Abdomen rather short, the second and third segments constricted apically; first segment with white hair fringing the basin and black hair just behind; first three segments slightly rufescent, each with a very narrow, rather inconspicuous, apical hair-band, which widens laterally on first into a white patch, and on the others into a large long-triangular patch, which is suffused with yellowish; similar patches are seen at sides of fourth segment; sixth segment rather obtusely bispinose.

Related to *M. rhodura*, Ckll., but much more robust, with the abdominal punctures less dense and very much smaller, the wings much darker, &c.

*Hab.* Mackay, Queensland, May 1900 (*Turner*, 624).

#### *Localities of Mexican Bees.*

In paper XXVI. of this series, I described certain Mexican bees in the Berlin Museum, the precise localities of which were in doubt. The following information received from Mr. E. Strand will help to elucidate the matter:—

- (1) Ferdinand Deppe sent to the Berlin Museum in 1829 specimens from the following localities:—Temascaltepek; Real Ariba; Oaxaca; Vallereal; Rio Alvarado. Some of the bees, at least, were from Oaxaca, and very likely all came from there.
- (2) Alphonse Forrer collected in the high plateau at 8100 ft. in the vicinity of Durango, Mexico (Durango City=Ciudad Durango). The citation California on the labels is an error.

#### XXX.—*Bionomical Observations on some British Millipedes.*

By T. J. EVANS.

THE following observations deal with the habits, and especially the breeding- and moulting-habits, of some of the British Millipedes, viz. *Glomeris marginata*, *Polydesmus*